

Comparison of Solar Source Regions of LASCO Coronal Streamers and  
Solar Wind Sampled by ACE and Ulysses near Solar Maximum

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The highly inclined and distorted current sheet seen during the current solar maximum leaves a strong imprint on the solar corona as seen by SOHO LASCO and the solar wind sector structure as seen by Ulysses and ACE. Here we present results of studies to determine the solar source regions of (1) solar wind streams sampled in situ by Ulysses and ACE near solar maximum and (2) coronal streamers seen by the LASCO C3 coronagraph. The solar source region of the Ulysses-sampled wind is determined using a two-step mapping of the data to the Sun: (1) a "ballistic" mapping (constant radial velocity using the velocity measured at Ulysses) is used to map the wind from Ulysses to the solar source surface,  $R=2.5R_{\text{sun}}$  and (2) a source surface magnetic field model is used to complete the mapping to the solar surface. For the coronal streamers, multiple view points provided by solar rotation are used to determine the location of the streamers at the source surface and, again, the magnetic model is used to map the field lines to the solar surface. We will report results for analysis of Carrington Rotations 1953 and 1957 when Ulysses was at about  $-30^\circ$  latitude. It has been shown previously that coronal streamers lie along the current sheet. Here we compare the current sheet location as determined by the streamers and the magnetic models to heliospheric current sheet crossings seen by Ulysses and ACE.